while, the snake tried to escape by lashing at the bird with its head and tail, but was unsuccessful. The bird killed and pecked it to pieces, swallowed the smaller pieces and carried off a larger one.

(b) The Puthuthotam estate (10° 20' N and 76° 58' E) is situated outside Valparai, a hill station, which has coffee (*Coffea arabica*) and tea cultivation, and a patch of forest. The forest patch is one of the medium size forest fragments on the Valparai plateau (Kumar *et al.* 1995). The Pollachi-Valparai road passes through the Puthuthotam estate. Accidental killing of animals by vehicles on the road is very high in such patches (Kumara *et al.* 2000 and Vijay Kumar *et al.* in press). During maintenance operations on this road and a roadside drainage system, from August to September 1998, many Uropeltid snakes were killed. Vehicular traffic and domestic fowl killed other snakes as well, that came on to the road. In one hour, domestic fowl were seen to eat up to 5 snakes.

The total number of deaths observed in a 300 m distance dug at Puthuthotam was 67 *Uropeltis ocellatus*, 9 other Uropeltid species and one *Melanophidium punctatum*.

Digging continued in the area, but we saw only one or two animals along a stretch of 100 to 200 m. This indicates a localized distribution of these snakes in clumps. *Uropeltis ellioti* is a common snake in western and southern Karnataka, especially on agricultural land. We have also seen many snakes killed during soil filling in agricultural land.

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21. *LEPTOBRACHIUM SMITHI* MATSUI, NABHITABHATA & PANHA, 1999 (ANURA: MEGOPHRYIDAE), A NEW RECORD FOR INDIA

Leptobrachium smithi Matsui *et al.* (1999) was described on the basis of megophryid anurans from Thailand that were hitherto referred to as *Leptobrachium hasseltii* Tschudi, 1838 (Frost 1985, Taylor 1962, van Kampen 1923, Zhao and Adler 1993: 116). This latter species was once considered widespread, with Java in the Greater Sundas, Republic of Indonesia, as the type locality (Iskandar 1998 for colour photograph; Dubois and Ohler 1998 for review). *L. hasseltii* was reported from Meghalaya State in northeast India by Pillai and Chanda (1979).

A recent collection of *Leptobrachium* from Chandubi in the Mayeng Hill Reserve Forest (25° 48'-25° 55' N, 91° 21'-91° 32' E), altitude *c.* 90 m above msl, and Garbhanga Reserve Forest (55° 26' N, 91° 37'-91° 49' E), both localities within Kamrup district, Assam State, northeast India matches the description of *L. smithi* in the following characters: a moderate-sized species (male SVL 30.2-52.0 mm; n = 8; female SVL

TABLE 1
DATA ON MEASUREMENTS AND OTHER DETAILS OF ADULT *LEPTOBRACHIUM SMITHI* FROM ASSAM

Regn No	Sex	SVL	IMT	Dorsum Tuberculate
CND 7971	F	71.65	2.30	-
CND 7973	M	37.95	1.15	-
CND 7974	M	42.10	1.15	-
CND 7976	M	40.65	1.25	+ (faint at posterior)
CND 7977	M	40.50	1.15	+
CND 6921	M	30.20	1.15	-
GRB 6981	F	59.85	1.70	+
GRB 6982	M	52.20	1.65	-
GRB 6983	M	42.60	1.65	-

Acronyms: F = female; SVL = snout-vent length;
IMT = greatest length of inner metatarsal tubercle;
- = absence; + = presence. All measurements in mm.

59.85 and 71.65 mm; n = 2; additional details in Table 1); upper half of iris scarlet; small inner metatarsal tubercle (metatarsal tubercle to SVL ratios 0.027-0.039; mean 0.032); dorsum typically smooth (although a third of our sample show faint tubercles on the posterior end of dorsum); white spots on sides of body and on thigh; dark spots on ventrum; absence of dark markings on dorsum; and rows of dermal ridges on dorsal surface of limbs absent. All specimens referred to were deposited in the Zoological Museum, Arya Vidyapeeth College, Guwahati, with the exception of one (ZSI A9135) that was deposited in the collection of the Zoological Survey of India, Kolkata.

We examined another example of this species, collected from the Khasi Hills (ZSI uncat.; detailed sampling data unavailable) that was registered as *L. hasseltii*.

Based on the known distribution of *Leptobrachium hasseltii*, Matusi *et al.* (1999) restricted the species to the Sundas. Therefore, it is inferred that earlier records from India (cf. Chanda 1994, 1995; Dutta 1997) are based on *L. smithi*. We confirm the removal of *hasseltii* from the amphibian fauna of northeast India on the basis of the specimens we report herein. The range extension now being reported suggests the occurrence of *L. smithi* in regions intervening between northeast India and Thailand, especially Myanmar, whose amphibian fauna is poorly known. Indeed, Matsui *et al.* (1999) suspected the occurrence of *Leptobrachium smithi* in the southern part of this country, on the basis of the description of *L. hasseltii* by Annandale (1917).

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Acronyms used: CND = Chandubi, Mayeng Hill Reserve Collection (Arya Vidyapeeth College Museum, Guwahati); GRB = Garbhanga Reserve Forest Collection (Arya Vidyapeeth College Museum, Guwahati); ZSI = Zoological Survey of India, Kolkata; SVL = snout-vent length.

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22. NOTES ON *TYLOTOTRITON VERRUCOSUS* ANDERSON: A CRITICALLY ENDANGERED NEWT FROM MANIPUR

The newt *Tylototriton verrucosus* was described by Anderson in 1871 from a specimen collected from Yunan region. The species is locally known as Lengva (Tangkhul) and Hangoi mamei panba (Manipuri). It is the only species of tailed amphibian recorded so far from India. Fully mature males measure 145-170 mm, while females measure 150-200 mm. The head is as broad as it is long and has an inverted V-shaped prominent ridge. The limbs are short, with four digits in the forelimbs and five digits in the hind limbs. The tail with its upper margin sharp edged is as long as the head and body together. The legs appear to be weak and their movement on land is sluggish. The body is dark brown above with a tubercle, two rows of porous knob-like prominent glands on either side of the vertebral ridge. Each row has 15-20 glands. The anal opening is a longitudinal slit with a slightly swollen rim. The species does not show sexual dimorphism, but during the breeding season females can be easily recognised by their distended body and swollen vent.

Habitat: Their favourite habitats are pools, ditches, ponds and paddy fields, and they have a habit of hiding under rotten leaves, in rock pools, roots and dead tree trunks near water. They are also found in small streams fringed with vegetation. At the onset of monsoon, they come out of their hiding places to the water for mating. They are active throughout the monsoon until winter sets in. During winter, they hide in the burrows of rats and in other safe places till the next monsoon. The eggs are laid on water bodies and tadpoles hatch out within a few days, maturing within a month or two. The species was found at high altitude where the climate is cold.

Distribution: Nepal, Sikkim, Darjeeling and Arunachal Pradesh. In Manipur, it is found only in Ukhrul and Senapati districts. In the late eighties, this species was abundant in Ukhrul and Mao areas. In Ukhrul district, it used to be found in places like Ngaimu, Pushing, Ukhrul, Hundung, Phungcham, Shihai Shiroi, Khangkhui, and Nungshong. But recent surveys